A Pilot Survey of Blind Population of one Block in Ahmednagar District in Rural Maharashtra conducted by the NAB Louis Braille Memeorial Research Centre

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A PILOT SURVEY OF BLIND POPULATION OF ONE BLOCK IN AHMEDNAGAR DISTRICT IN RURAL MAHARASHTRA

Conducted by

THE NAB LOUIS BRAILLE MEMORIAL RESEARCH CENTRE

PART I - INTRODUCTION

A. Background

In 1975, Indian Council of Medical Research, New Delhi,[1] carried out a sample survey in seven regions to estimate prevalence of blindness in India and found that there were about 84 lakh economically blind persons in the country. A person with a vision of 6/60 or less or when the field of vision was reduced to 200 or less was defined as economically blind[2]. The ICMR estimated the rate of prevalence of blindness to be 14 per thousand for the country as a whole. It was 15 per thousand for rural and 11 per thousand for urban areas. On the basis of these rates there may therefore be 95.73 lakh blind persons in the country at present out of India's population of 630 million. Further taking the current urban/rural distribution of population, it may be estimated that there are 17.18 lakh blind persons in urban and 79.14 lakh in rural areas.

There are approximately 360 institutions for the blind in our country at present. Taking the above blind population figure it is computed that there is one welfare institution per every 26,592 blind persons. This facility-client ratio be regarded as highly adverse. As a consequence, one would ordinarily expect great rush and competition for availing the existing facilities. A further corollary to this would be the conclusion that the number of such institutions is inadequate to cater to the needs of existing blind population and hence many more such institutions are required to be set up.

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1. "Study of Prevalence of Blindness", Indian council of Medical Research, New Delhi, Bulletin Vol. 5 No.10, October 1975.

2. Ibid -

3. Institutions for the Blind - A Mailing List, NAB Louis Braille Memorial Research Centre, Bombay, 1980.

LBMRC Research Newsletter (Louis Braille Memorial Research Centre)
Vol No. 07-01
April 1982

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The Problem

In reality, professionals working in the field of blind welfare often find that blind persons do not come forward in adequate number to take advantage of existing facilities, meager as they are. In fact, the Heads of such institutions are required to make conscious efforts to secure minimum number of clients required for their respective programmes. According to the study conducted by the Central Institute of Research and Training in Public Cooperation, New Delhi (1972)[4] on an average, 50 blind persons per institution actually benefitted from the existing facilities and that many leading schools, Rehabilitation Centres for the blind operated far below their capacity.

In view of this it would seem more appropriate that before contemplating any expansion with regard to number and scope of welfare institutions, our immediate goal should be to ensure fuller utilisation of available facilities.

The problem of ensuring fuller utilisation can be tackled with different approaches. One of the solutions may be to disseminate more effectively information of educational, rehabilitation and other welfare facilities among the rural blind. The present survey was therefore conducted as a first step in the direction of identifying and locating blind persons in rural parts of the country. The present investigation should however be treated only as a pilot study because of its limited scope and nature as will be revealed later. It was also our endeavour to study Socio-economic status of this segment of population as well as to find out the extent of utilisation of blind welfare facilities.

The problem of locating blind persons is fraught with several difficulties. There were no census enumerations of the blind since 1931 nor there have been any countrywide surveys (except

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[4] All India Directory of Welfare Agencies for the Blind, Central Institute of Research and Training in Public Cooperation, New Delhi, 1972.

perhaps the ICMR study referred to above). Owing to specific reasons listed earlier and due to poverty, illiteracy, ignorance and apathy, rural people are indifferent towards rehabilitation and welfare programmes and are reluctant to send the blind members of their family to the rehabilitation and training institutions with the help of the list of blind persons identified. With the present investigation, it will be possible for Institutions to contact those who are in need of special care. Further, it will also help in making local self-government agencies aware about the magnitude of blind population in their area, so that these agencies can reach out to them with a view to offer benefits of different welfare schemes.

C. Objectives

The objectives of this study were (1) to ascertain the prevalence of blindness in the area under survey, (2) to broadly enquire into the respondents' socio-economic conditions and (3) to find out the extent of utilisation of blind welfare programme of education and rehabilitation.

D. Universe

The present pilot study was carried out in rural Maharashtra. The State of Maharashtra is in the fore-front in blind welfare movement. There are, in all 69 schools, rehabilitation centres and other institutions for the blind in the State.[5] It was, therefore, thought that if a survey was carried out to locate and identify blind persons in this state, it would benefit large no. of institutions as well as the blind clients. The state of Maharashtra was also selected for other practical considerations such as convenience, accessibility etc.

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[5] 'Institutions for the blind - A Mailing List' NAB Louis Braille Memorial Research Centre, Bombay 1980.

There are about 36,000 villages in Maharashtra and rural population is 219 lakhs. (1981) On the basis of the rates of prevalence of blindness as revealed in the ICMR survey[6], it can be estimated that the economically blind population of rural Maharashtra would be 6.11 lakhs and of Urban Maharashtra 2.41 lakhs.

E. Sample

For the purpose of present pilot survey, Nagar Block in Ahmednagar District from rural Maharashtra, was selected. The survey covered the population of the entire block of 1.18 lakhs. (1971 census).

There are 106 villages in Nagar Block. The total area of the block is 1,515.7 sq.kms. The density of population at the time of survey was 200 persons per one sq. kilometer. All villages have pucca or kacha roads and have postal facilities. Only some villages have the facility of railway line. Primary education is available in all villages while there are 2 middle and 18 secondary schools in this block.

F. Methodology

The present survey was carried out by the NAB Louis Braille Memorial Research Centre in collaboration with Ahmednagar Jilla Parishad in March 1979. The Research Centre took the responsibility for planning the survey and preparing the interview schedule as well as for data analysis and interpretation. On the other hand, Nagar Panchayat officials particularly the B.D.O. Shri Makande attached to the Zilla Parishad, rendered fullest assistance in the work of actual data collection. Enumerators were sent by the Parishad to every household in the block for collecting data.

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[6] Study of Prevalence of Blindness. Indian Council of Medical Research, New Delhi, Bulletin Vol.5 No. 10, October, 1975.

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A semi structured interview schedule was used for data collection. There were 12 questions in the schedule. The following information was sought: Name, Address, Age, Sex, Education, Occupation, Income, Age at onset of blindness, cause of blindness, degree of vision, whether clients had any training in rehabilitation and reasons for not utilising educational and rehabilitation facilities.

G. Definition of Blindness

The definition of blindness that was adopted in 1931 census[7] operations was accepted for the present study with slight modifications in as much as the condition of blindness referred to therein was further classified as 'total' and 'not-total'. While 'totally blind persons' were considered as those with complete absence of vision the rest were treated as 'not-totally blind'. Our decision to operationalise the 1931 definition as above was also guided by the fact that local enumerators were lay persons and the procedure to be used in determining the degree of blindness must be easy to understand.

PART II - THE RESULTS

In this survey, it was found that the average incidence of blindness in Nagar Block was 2 persons per village. There were 230 blind persons and they were located in 106 villages. The rate of blind population for the Nagar Block as a whole was 1.9 per thousand. Except for the solitary case of Bhorwadi village (12.9 per thousand), all other villages had less than 10 blind persons per thousand population

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[7] In order to find out whether a person is blind or not he will be asked to count fingers of hand at a distance of 1 meter (about 3.1/4 feet). The fingers will be moved to right and left, and up and down, during the vision test. If the person is not able to tell the number of fingers he would be considered to be blind. Even if he is above to make out light and darkness and sees objects and colour when brought very near to the eye, he is considered as a blind person.

Table - 01

Village-wise Distribution of Blind Persons in Nagar Block

Name of Village	No. of Blind persons	Total population of the village	Incidence of Blindness per thousand persons
Arangaon	3	2,184	1.4
Akalner	3	5,015	0.6
Ambilwadi	2	600	3.3
Agadgav	7	3,580	2.0
Baburdi Ghumat	4	1,029	3.9
Burudgav	7	1,758	4.0
Baburdi Bend	1	553	1.8
Bhatodi	7	1,429	4.9
Bhorwadi	15	1,165	12.9
Chinchodi Patil	9	3,881	2.3
Chas	7	2,520	2.8
Devgaon	1	790	1.3
Dehere	1	2,433	0.4
Darewadi	6	2,418	2.5
Dahigaon	2	806	2.5
Devalgaon Siddi	1	1,796	0.6
Gundegaon	2	2,922	0.6
Gunawadi	2	1,171	1.7
Hatvalan	2	577	3.5
Hingangaon	4	1,469	2.7
Hiverebazar	1	758	1.3
Islampur	2	597	3.4
Islak	5	610	8.2
Jeur	3	9,624	0.3
Jakhangaon	2	890	2.2
Kamargaon	5	2,199	2.3
Khadiki	1	836	1.2
Kedgaon	3	3,121	1.0
Khatgav	5	1,357	3.7
Karjunekhare	6	2,437	2.5
Khospuri	3	962	3.1
Mattpimpri	4	1,164	3.4
Mathani	4	473	8.5
Mehekari	2	1,997	1.0
Mededgaon	2	739	2.7
Nimbodi	3	1,486	2.0
Nimgavghana	6	927	6.5

Name of Village	No. of Blind persons	Total population of the village	Incidence of Blindness per thousand persons
Nagpur	5	1,001	5.0
Nepti	4	2,349	1.7
Nimbalak	5	1,859	2.7
Pimpalgaon Kowda	6	813	7.4
Paragaon Bhatodi	3	1,374	2.2
Pimpalgaon Landga	1	1,159	0.9
Pimpalgaon Malvi	2	3,329	0.6
Paragaon Mola	4	738	5.4
Pimpalgaon Ujjain	4	1,777	2.3
Raichithisi	5	2,379	2.1
Ralegaon	2	2,437	0.8
Sakatkhurd	1	555	1.8
Sarola Kasar	4	2,871	1.4
Sonewadi	6	725	8.3
Sarolabaddi	2	1,005	2.0
Shirdhone	2	959	2.1
Sandve	4	1,122	3.6
Tandil (Vadgav)	5	721	6.9
Takklikhaji	1	1,005	1.0
Wataphal	3	841	3.6
Wadgaongupta	3	2,151	1.4
Walki	3	4,975	0.6
Warulwadi	2	350	5.7
Wakodi	2	1,882	1.1
Wadrav Tandli	5	1,353	3.7
Walunj	3	1,533	2.0
NAGAR BLOCK	230	1,18,236	1.9

Note: Village-wise 1981 census figures are not available and so 1971 census figures have been given.

The percentage of the totally blind was 76.52. The remaining 23.48 percent of the respondents belonged to the category of "not-totally blind". Among the respondents in the former category, light and darkness could be distinguished by only 0.6 per cent. Among the respondents who were "not-totally blind" colour could be distinguished by 81.48 per cent and 85.19 per cent could identify objects, when held very close to the eye.

Table - 02

Incidence of Blindness in Nagar Block

Number of Blind Persons	Number of Villages	Blind population
None	43	0
One	9	9
Two	15	30
Three	11	33
Four	9	36
Five	8	40
Six	5	30
Seven	4	28
Nine	1	9
Fifteen	1	15
Total	106	230
Average per village		2.17 Blind persons.

The highest incidence of 15 blind persons was found only in one village, followed by 9 blind persons in another village. The lowest incidence of one blind person per village was reported from 9 villages. In as many as 43 villages there were no cases of blindness.

The above discussion shows that the Nagar Block does not seem to be an endemic area prone to blindness as the incidence for the block as a whole as well as for each village was far below the ICMR figure.

A. Demographic Characteristics

From the data presented in Table 03 below, it will be seen that there were 121 males (52.61%) and 109 females (47.39%). The sex ratio was 10:9. The average age of respondents was 50.72 years. It was 46.67 years for male respondents and 55.03 years for females (the standard deviation being 19.90 years and 12.33 years for the two sex groups respectively). Almost half the respondents, belonged to the age group of 60 years and above (45.45 per cent and 57.80 per cent respectively). This shows that there is greater need for the provision of welfare facilities for the aged blind in this area.

Table - 03

Distribution of Blind Persons according to Age and Sex

Age (in years)	Male	Female	Total
0- 9	9 (7.44%)	2 (1.83%)	11 (4.78%)
10-19	8 (6.61%)	1 (0.92%)	9 (3.91%)
20-29	10 (8.26%)	-	10 (4.35%)
30-39	12 (9.92%)	7 (6.42%)	19 (8.26%)
40-49	7 (5.79%)	13 (11.93%)	20 (8.70%)
50-59	20 (16.53%)	23 (21.10%)	43 (18.70%)
60+	55 (45.45%)	63 (57.80%)	118 (51.30%)
Total	121	109	230
Average	46.67 years	55.03 years	50.72 years
S.D.	19.90 years	12.33 years	17.50 years
Sex ratio 10:9			
Percentage	52.61	47.39	

It was found that the percentage of males was higher than females in the age groups of below 39 years. In the age groups of 40 years and above the percentage of females was greater as compared to males. The reasons for predominance of male blind over females in young age groups is hard to explain.

B. Socio-Economic Characteristics

1. Education

Table 04 below shows that there was very high prevalence of illiteracy among the respondents (89.57%). Only 5.63 per cent of them had education upto primary level. Middle school level of education was reported by 3.04 per cent, while a small fraction of respondents (0.87%) had studied upto secondary and college level. On the whole the educational achievement of males was somewhat better than that of females. Almost all female respondents were found to be illiterate (99.08%) which is perhaps indicative of the typical attitude of rural community towards the education of women in general and blind among them in particular.

Table - 04

Distribution of Blind persons according to level of education

Level of Education	Male	Female	Total
Illiterate	98 (80.99%)	108 (99.08%)	206 (89.57%)
Primary	13 (10.74%)	-	13 (5.65%)
Middle School	6 (4.96%)	1 (0.92%)	* 7 (3.04%)
Secondary	2 (1.65%)	-	2 (0.87%)
Graduation	2 (1.65%)	-	2 (0.87%)
Total	121	109	230

Table - 05

Distribution of Blind Persons according to reasons for not attending/continuing school education.

Reasons	No. of persons	Per centage
Economic Stringency	13	7.07
Domestic difficulties	19	10.33
Absence of educational facilities in close proximity	10	5.43
Parents' reluctance	12	6.52
Respondents' reluctance	6	3.26
Too young for schooling	5	2.72
No response	119	64.67
TOTAL	184	100

NOTE: Further as many as 19 respondents merely gave blindness as the reason for not attending/continuing school education.

When a question about the reasons for not attending/continuing in school was asked, 64.67 per cent of the respondents did not give any particular reason. The reasons offered by the remaining respondents in the order of importance were Domestic difficulties, (10.33%), Economic Stingency (7.07%), Parents' reluctance (6.52%) etc. In this context it was found that the existence of special schools for the blind was unknown to blind persons and their family members in this area with the result as may as 19 respondents who offered blindness as the sole reason for not attending school could have been benefited by the formal education.

The table 06 reveals that most of the adult respondents (82.61%) had no gainful occupation. This is to be expected in view of the earlier findings (of table Nos. 03 and 04).

Table - 06

Distribution of Blind Persons according to occupation

Occupation	Male	Female	Total
Domestic Work	1 (0.83%)	6 (5.50%)	7 (3.04%)
Manual Labour	4 (3.31%)	2 (1.83%)	6 (2.61%)
Begging	3 (2.48%)	3 (0.93%)	6 (2.61%)
Farming	4 (3.31%)	1 (0.94%)	5 (2.17%)
Agricultural Labour	1 (0.83%)	-	1 (0.43%)
Water Carrier	1 (0.83%)	-	1 (0.43%)
Unspecified	1 (0.83%)	-	1 (0.43%)
No gainful occupation			
a) Adults	95 (78.51%)	95 (87.16%)	190 (82.61%)
b) Students	8 (6.61%)	1 (0.94%)	9 (3.91%)
c) Children	2 (1.65%)	1 (0.94%)	3 (1.30%)
No response	1 (0.83%)	-	1 (0.43%)
TOTAL	121	109	230

It is said to notice that 2.61 per cent of respondents were earning their livlihood by way of begging in the absence of any gainful employment (the same percentage as of those who earn their livlihood working as labourers). In respect of occupation-wise distribution, it was noticed that as is natural in the Indian Context more women were engaged in indoor work like 'domestic help' (5.50%), while male respondents were engaged in outdoor jobs like labour, farming etc. (3.31%).

iii. Income

From the table 07 below it can be seen that majority of respondents reported no regular income (82.61%). 15.65 per cent of the respondents earned below Rs.200/- p.m. An income of Rs. 200/- to Rs. 399/- p.m. and Rs. 1,000/- and above p.m. were reported by two respondents in each category.

This table also reflects the typical economic status of rural population where more males had regular income than females.

Table - 07

Distribution of Blind Persons according to Level of Income

Level of Income (p.m.)	Male	Female	Total
No Income	91 (75.21%)	99 (90.83%)	190 (82.61%)
Below Rs.200/-	27 (22.31%)	9 (8.26%)	36 (15.65%)
Rs. 200/- - 399/-	2 (1.65%)	-	2 (0.87%)
Rs. 100/- - 599/-	-	-	-
Rs. 600/- - 799/-	-	-	-
Rs. 800/- - 999/-	-	-	-
Rs. 1000/- +	1 (0.83%)	1 (0.92%)	2 (0.87%)
TOTAL	121	109	230

C. Causes of Blindness

As will be apparent from table 08 below the three most prevalent causes of blindness were glaucoma (12.61%), congenital defects (9.13%) and conjectivitis (7.39%). As many as 18.70 per cent reported that their blindness was incidental to old age. Besides these, other causes reported by the respondents in this area are also shown in the following table.

Table - 08

Distribution of Blind Persons according to Cause of Blindness

Cause	No. of persons	Percentage
Diseases incidental to old age	43	18.70
Glaucoma	29	12.61
Congenital defects	21	9.13
Conjectivitis	17	7.39
Small Pox	16	6.96
Cataract	13	5.65
Corneal Opacity	7	3.04
Accidents	7	3.04
Post-operational complications	3	1.30
Measles	2	0.87
Brain Tumour	1	0.43
Trachoma	1	0.43
Other causes	42	18.26
No response	28	12.17
Total	230	100

D. Age at Onset of Blindness

The average age at onset of blindness for all respondents was 38.61 years. (The standard deviation was 23.20 years). This shows that a large number of respondents were blinded when they were young. Many useful years of their productive life were thus cut-short due to this handicap. The average age at onset of blindness for male respondents was 34.17 years and 42.67 years for females. In both male and female groups, the incidence of blindness increased with advancing age. However, more male respondents (35.54%) were blinded in their early life (below 10 years) than female respondents (10.09%). This shows that in younger age groups males were more prone to blindness than females in this block. The next highest incidence of blindenss among males was in the age group of 60 years and above (32.11%) followed by 21.10 per cent in the age group of 40-49 years.

Table - 09

Distribution of Blind Persons according to Age at Onset of Blindness

Age (in years)	Male	Female	Total
0- 9	45 (35.54%)	11 (10.09%)	54 (23.48%)
10-19	6 (4.96%)	4 (3.67%)	10 (4.35%)
22-29	2 (1.65%)	7 (6.42%)	9 (3.91%)
30-39	6 (4.96%)	9 (8.26%)	15 (6.52%)
40-49	16 (13.22%)	23 (21.10%)	39 (16.96%)
50-59	21 (17.36%)	20 (18.35%)	41 (17.83%)
60+	27 (22.31%)	35 (32.11%)	62 (26.96%)
Total	121	109	230
Average	34.17 years	42.67 years	38.61 years
S.D.	25.00 years	19.30 years	23.20 years
Percentage	52.61	47.39	

When the date on age at onset of blindness was cross tabulated with level of education, it was found that there was no co-relation between the two variables.

Table - 10

Age at Onset of Blindness by Cause of Blindness

Age (in years)	Small Pox	Glaucoma	Conjectivitis	Old Age	Corneal opacity	Congenital defects	Cataract	Trachoma	Post operational complications	Measles	Tumour	Accidents	Others	No response	Total
0- 9	9 16.67%	2 3.70%	11 20.37%	-	-	20 37.04%	-	-	-	-	-	1 1.85%	4 7.41%	7 12.96%	54
10-19	1 10.00%	4 40.00%	-	-	-	-	-	-	-	1 10.00%	-	1 10.00%	3 30.00%	-	10
20-29	1 11.11%	1 11.11%	4 44.44%	-	-	-	-	-	-	-	-	1 11.11%	1 11.11%	1 11.11%	9
30-39	3 20.00%	2 13.33%	1 6.67%	-	-	-	1 6.67%	-	-	-	1 6.67%	-	3 20.00%	4 26.67%	15
40-49	2 5.13%	9 23.08%	-	5 12.82%	2 5.13%	-	3 7.69%	-	1 2.56%	-	1 2.56%	1 2.56%	10 26.64%	5 12.82%	39
50-59	-	5 12.20%	1 2.44%	10 24.39%	1 2.44%	1 2.44%	6 14.63%	1 2.44%	1 2.44%	-	-	1 2.44%	8 19.51%	6 14.63%	41
60+	-	6 9.68%	-	28 45.16%	4 6.45%	-	3 4.84%	-	1 1.61%	-	-	2 3.23%	13 20.97%	5 8.06%	62
Total	16	29	17	43	7	21	13	1	3	1	2	7	42	28	230

From table 10, it can be seen that the most important causes of blindness for children were congenital defects (42.55%), conjectivitis (19.15%), small pox (14.89%) and glaucoma (4.26%) in that order. The incidence of small pox and conjectivitis as the causes of blindness decreased gradually with increasing age. However, in respect of causes like glaucoma, corneal opacity and cataract, the incidence of these diseases increased with the advancing age. Accidents as the cause of blindness was reported almost evenly amongst all respondents.

E. Utilisation of Rehabilitation Services

Table - 11

Distribution of Blind Persons
according to training in Rehabilitation

Status	Male	Female	Total
Trained	7 (5.79%)	-	7 (3.04%)
Untrained	114 (94.21%)	109	223 (96.96%)
Total	121	109	230

It was found that only a small fraction of 7 respondents (3.04%) had undergone rehabilitation training worth the name although there are several blind welfare programmes in existence to cater to different age groups in the country.[8]

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[8] As stated earlier, there are approximately 360 institutions for the blind in the country at present. Of these there are 165 schools, 15 rehabilitation Centres, 25 workshops and industrial houses and 155 other institutions or association for the blind.

The reasons for this meager utilisation of rehabilitation services may be due to numerous reasons namely i. Most of Welfare institutions for the blind are located in Urban areas while majority of blind population lives in rural parts ii. Owing to lack of publicity about the existing blind welfare institutions, the community at large, may not be fully aware of these institutions and iii. There may be certain lack of awareness on the part of blind persons and their families about the usefulness of education, training and rehabilitation to a visually handicapped individual.

PART III - SUMMARY

1. There were 230 blind persons in 106 villages with total population of 1.18 lakhs. The average incidence of blindness in Nagar block was 2 persons per village and the rate of blind population in the block was 1.9 persons per thousand.
2. There were 176 'totally-blind' persons (76.53%) in Nagar block while 54 belonged to 'not totally-blind' category (23.48%). There were more males than females among the blind population of Nagar block and many belonged to the old age group of 60 years and above. Thus there is greater need for the provision of welfare facilities for the aged blind in this area.
3. Majority of the respondents belonged to 'no education' 'no occupation' and 'no income' categories thus indicating their low socio-economic status.
4. The average age at onset of blindness was 38.61 years on the whole. It was 34.17 years for males and 42.67 years for females. In the age group of below 10 years, more male (35.54%) than female (10.09%) children became blind.

5. The often reported causes of blindness in Nagar Block were (in the descending order of) glaucoma, congenital defects, conjectivities, small pox, cataract, corneal opacity and accidents.

6. Among children, the important causes of blindness were congenital defects, conjectivitis and small pox, while among the elderly persons these were glaucoma, cataract and corneal opacity.

7. A negligible percentage of blind population had undergone rehabilitation training (3.04%).

As a follow up action to this survey, a complete list of blind persons in Nagar Block with their address and other particulars will be sent to all special schools and institutions for the blind in Maharashtra so that these agencies can establish contact with the blind individuals identified in the Survey, with a view to informing them about the blind welfare programmes.

PART - IV CONCLUSIONS

In this survey, we have referred to blind persons as 'totally blind' and 'not-totally blind'. It will therefore be noticed that the reference here is not to the 'economically - blind'. On the basis of ICMR Survey rates of Prevalence of economic blindness and assuming that the ratio of 'totally blind' to economically-blind' as 40:60, the following rates of prevalence of total blindness for the country as a whole can be computed.

Table - 12

Incidence of Blindness in India - 1981

Distribution of population	Population according to 1981 census (in lakhs)	Economically blind population on the basis of ICMR survey (in lakhs)	Rate of prevalence of economic blindness (per thousand)	Estimated totally blind population (in lakhs)	Rate of Prevalence of total blindness (per thousand)
Urban	1561.88	17.18	11	6.87	4.4
Rural	5276.22	79.14	15	31.65	6.0
Total	6838.10	95.73	14	38.29	5.6

These rates are 4.4 per thousand for Urban areas 6.0 per thousand for rural areas and 5.6 per thousand for the country as a whole.

If the above rates are compared with those revealed in the present study, it can be seen that the derived figures in table 12 appear to be on higher side. This conclusion is further supported by the data on blindness available for few selected Districts in the state of Maharashtra, which is presented in the following table :

Table - 13

Prevalence of Blindness in some selected Districts of Maharashtra

District	Total population according to 1981 census (in lakhs)	Blind population[9]	Rate of Prevalence of blindness (per thousand)
Bhir	14.84	3,266	2.2
Kolhapur	24.98	2,999	1.2
Nasik	29.85	896	0.3
Ratnagiri	21.09	2,742	1.3

Source: District Health Office records as provided by the respective zilla parishads.

The highest incidence of blindness is found in Bhir district (2.2 per thousand) followed by Ahmednagar district, if Nagar block was treated as representative of Ahmednagar district with 0.3 per thousand. Basing on the available figures on prevalence of blindness in different districts of Maharashtra as well as those for Nagar block, one major conclusion that emerges from the study is that the rate of prevalence of blindness estimated by the ICMR study seem to be rather on higher side.

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[9] Zilla Parishads provided statistics relating to blind population according to 1971 census. The figures in the table are derived by applying those rates of Prevalence of blindness to 1981 population figure.

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